



CHILD HEALTH NOTE 2018- 4TH Q

Washington State Medical Home Partnerships Project

Promoting partnerships between primary health care providers, families, and the community to support early identification of children with special needs and comprehensive care within a primary care Medical home.

Distributed by: CLARK COUNTY PUBLIC HEALTH-Children with Special Health Care Needs

Contributors: Washington State Department of Health (DOH) and UW - Center on Human Development & Disability. Primary issue author: Shilpi Chabra, MD, Neonatologist, UW and Seattle Children's. Issue editor and co-author: Sophie Lu, MN, ARNP, Developmental Pediatric Nurse Practitioner, UW CHDD. Reviewers: Melissa Charbonneau, RN, BSN, PHN 3, Spokane Regional Health District; Bat-Sheva Stein RN, MSN, Perinatal Nurse Consultant, WA State DOH; Tiffani Buck WHNP-BC, MS, RN, WA State DOH.

Late and Moderate Preterm Infants: Best Practices for a Population at Risk

Moderate and late preterm infants, defined as birth at 32 0/7-33 6/7 weeks and 34 0/7-36 6/7 weeks of gestation respectively, are more vulnerable to brain injury and neurodevelopmental sequelae than previously appreciated. They account for ~84% of all preterm births and ~6-7% of all births in the United States. These infants are at increased risk for short and long-term neonatal morbidity and mortality. The third trimester of pregnancy is a period of rapid fetal brain development characterized by growth of gray matter, increased myelination, increased synaptogenesis and neural connectivity. Underdevelopment of the preterm brain has been associated with poorer educational/academic performance and lower intellectual ability compared with full-term infants. The most common clinical problems for this population are respiratory distress/insufficiency in the immediate neonatal period, hypoglycemia, hyperbilirubinemia, hypothermia, and feeding difficulties.

Late preterm infants are often considered "imposters" as they appear healthy and may have similar developmental scores as their term counterparts at 24 months. However, issues with higher executive function reemerge at preschool and kindergarten. Because of these high numbers, even a modest increase in babies born at these gestations can have a high impact on the economic burden due to long-term health and developmental problems.

CDC Natality Dashboard for Increasing Preterm Birth Rates

The 12 month total preterm birth rates (<37 weeks) increased from 9.87 to 9.93% (2017 Q1 to 2018 Q1) which comprises predominantly of late preterm (34-36 weeks) (7.12 to 7.18) with no change seen for early preterm (<34 weeks) (2.75 to 2.75).

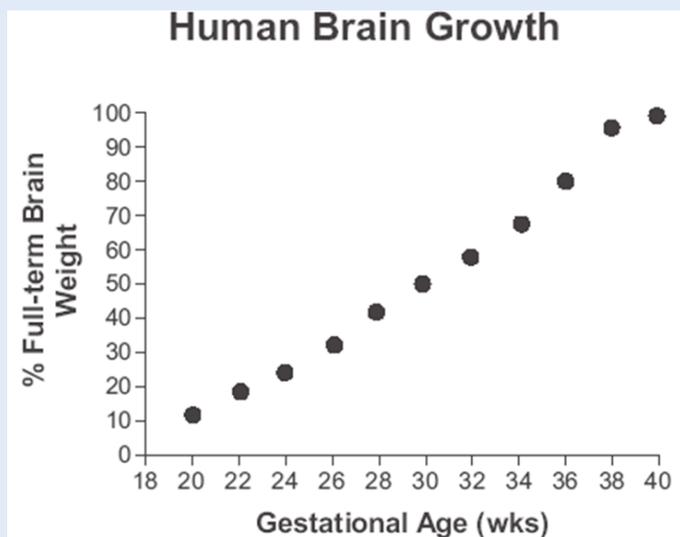
Short Term Outcomes

Immediate Postnatal Period:

- Most common clinical problem: increased incidence of respiratory distress
 - 1/3 need respiratory support and 3% need mechanical ventilation
 - Rarely severe respiratory failure requiring ECMO
- Apnea
- Feeding immaturity
- Hyperbilirubinemia
- Hypothermia
- Hypoglycemia
- Sepsis

Newborn Period:

- Have higher morbidity & mortality than term infants. They are:
 - 1.5 times more likely to need hospital care after routine newborn care
 - 2 times more likely to be readmitted to hospital during the first 28 days of life.



Long Term Outcomes

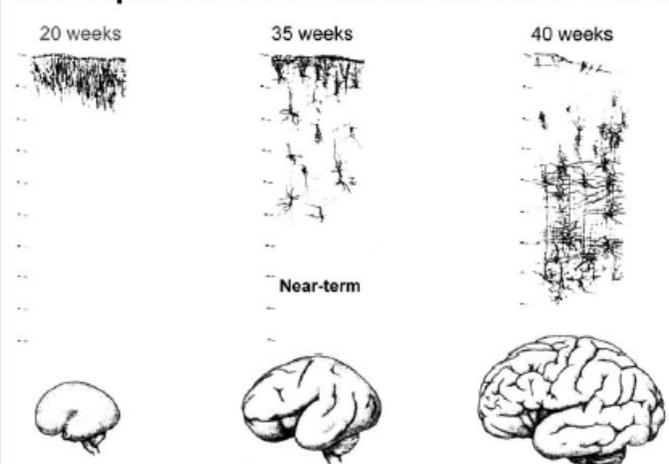
Compared to term, higher risk for:

- Motor and language delay
- Poor executive functioning (self-regulation, inhibition, judgement, working memory)
- Poor visual-motor skills
- Lower intelligence
- Lower reading and math scores
- Difficulty with fine motor skills and writing
- Behavioral and emotional disturbances
- Psychological problems
- Blindness, decreased vision, hearing loss, epilepsy

At school age increased risk for:

- Cognitive impairments
- Difficulty with complex language functions
- Up to 1/3 with learning difficulties requiring additional help at school
- Hyperactivity in 8% with associated poor school performance
- Neurosensory impairments: sensory modulation and processing difficulty
- Motor skills (coordination, balance)

Development of the Human Cerebral Cortex



Implications for Primary Care Providers (PCPs)

It will be important for PCPs to remember that patients with a history of moderate-to-late preterm birth face a higher incidence of developmental delays, learning/school challenges (particularly in reading and math), executive functioning difficulties, and behavioral problems. PCPs can identify developmental delays in this population through universal developmental screenings with a standardized instrument at well-child visits. If a concern is identified, a PCP may refer for further evaluation to early intervention (if under 3 years old), to the school for an Individualized Education Plan (IEP) (if 3 years and older), and/or a neurodevelopmental specialist such as a developmental pediatrician or developmental nurse practitioner. PCPs can also have families fill out the [Ages and Stages Questionnaire \(ASQ\) online](#) through WithinReach free of charge for Washington State families. It takes 10-15 minutes to complete the ASQ. A coordinator from WithinReach will call the family to talk about the results and can suggest activities or resources. PCPs can partner with families in monitoring for developmental issues by educating parents on the short and long-term morbidities of this population.

References

- Cheong JL, Doyle LW, Burnett AC, Lee KJ, Walsh JM, Potter CR, Treyvaud K, Thompson DK, Olsen JE, Anderson PJ, Spittle AJ. Association Between Moderate and Late Preterm Birth and Neurodevelopment and Social-Emotional Development at Age 2 Years. *JAMA Pediatr.* 2017 Apr 3;171(4):e164805
- Johnson S, Evans TA, Draper ES, Field DJ, Manktelow BN, Marlow N, Matthews R, Petrou S, Seaton SE, Smith LK, Boyle EM. Neurodevelopmental outcomes following late and moderate prematurity: a population-based cohort study. *Arch Dis Child Fetal Neonatal Ed.* 2015 Jul;100(4):F301-8.
- Kelly CE, Cheong JL, Gabra Fam L, Leemans A, Seal ML, Doyle LW, Anderson PJ, Spittle AJ, Thompson DK. Moderate and late preterm infants exhibit widespread brain white matter microstructure alterations at term-equivalent age relative to term-born controls. *Brain Imaging Behav.* 2016 Mar;10(1):41-9.
- Shah PE, Kaciroti N, Richards B, Lumeng JC. Gestational Age and Kindergarten School Readiness in a National Sample of Preterm Infants. *J Pediatr.* 2016 Nov;178:61-67.
- Spittle AJ, Walsh JM, Potter C, McInnes E, Olsen JE, Lee KJ, Anderson PJ, Doyle LW, Cheong JL. Neurobehaviour at term-equivalent age and neurodevelopmental outcomes at 2 years in infants born moderate-to-late preterm. *Dev Med Child Neurol.* 2017 Feb;59(2):207-215.

Special Needs Information and Resources:

Local:	Children w/Special Health Care Needs, CCPH Early Support for Infants/Toddlers	Connie Callahan, PHN Phone: 360.397.8440 To make referral--call 360.750.7507
Regional:	UW Late and Moderate Preterm Babies (LAMBs) Clinic Specializes in the moderate and preterm population. Offers developmental evaluations from 4 months corrected age up to 2-3 years chronological age at regular intervals. Early Support for Infants and Toddlers Program	Phone: 206-598-9348 https://healthonline.washington.edu/document/health_online/pdf/LAMBs-Clinic.pdf (if link doesn't open, copy and paste in browser)
	Ask Now - Babies & Kids Can't Wait brochure (Providers can order from WithinReach Website)	https://www.dcyf.wa.gov/services/child-development-supports/esit Phone number: 360-725-3500
	Snohomish County's EI Website has fantastic resources including: Kindergarten Readiness Guidelines	http://www.withinreachwa.org/products-page/
	School Readiness information from WithinReach Website for families	https://www.snohomishcountywa.gov/607/Early-Intervention-Program-Birth-to-Thre
National/ Internet:	Multidisciplinary Guidelines for the Care of Late Preterm Infants by the National Perinatal Association	http://parenthelp123.org/pages/child-development/4-6/school-readiness/preview http://www.nationalperinatal.org/latepreterm
	Late Preterm Birth: Late Preterm Preterm Birth: Increased Clinical Risk Presentation by Dr. Jodi Jackson	https://www.marchofdimes.org/chapterassets/files/late_preterm_birth_jodi_jackson_revised.pdf (if link doesn't open, copy and paste in browser)
	Supporting Premature Infant Nutrition (SPIN) at UC San Diego Health, Late Preterm Infant Information	https://health.ucsd.edu/specialties/obgyn/maternity/newborn/nicu/spin/staff/Pages/late-preterm.aspx
	Policy Statement from the American Academy of Pediatrics: The Pediatrician's Role in Optimizing School Readiness	http://pediatrics.aappublications.org/content/138/3/e20162293 Pediatrics, Sept 2016, Volume 138 / Issue 3

Local News & Services Highlights



[App Link](#)

Please help promote the **CDC developmental milestones tracker app** for families which is now in Spanish as well (families will be able to toggle back and forth between English and Spanish). The app is available from Within Reach's parenthelp123.org website or via the Family Health Hotline at 1-800-322-2588.

Webinar from Washington Chapter of Pediatrics: Great MINDS – ASD Standardized Autism Screening Training

You can better serve the children in your practice and strengthen your familiarity with autism screening and the referral process by participating in this Great MINDS AS3D eLearning course. Presented by an experienced physician, this course covers:

- Why you should use a screening tool.
- How to integrate use of a screening tool into your practice.
- Appropriate documentation.
- Results, resources, and referrals.

At the completion of this activity, you will be able to:

- Improve autism screening in practices which serve children, including those in medically underserved areas, in accordance with AAP policy statements and Bright Futures guidelines.
- Describe strategies to conduct culturally appropriate universal development screening.
- Describe standardized autism screening tools.
- Explain proper documentation of screening tool use.
- Identify local community resources for autism evaluation and intervention.
- Summarize the evolving systems and supports for primary care providers around autism screening and connection to services and supports.

[Register and view](#)

EARLY SUPPORT FOR INFANTS AND TODDLERS (ESIT)

Early Support for Infants and Toddlers (ESIT) is the Washington State Department of Early Learning program designed to be the first point of contact for any parents concerned about the development of their children Birth-3 years old. ESIT offers free developmental screenings for infants and toddlers along with an informational meeting for parents with a Family Resources Coordinator. Once a child is screened, a Family Resources Coordinator helps each family access the Early Intervention services through a referral system and provides each family with additional community resources for support. ESD 112 is the local lead agency for Clark, Klickitat, Pacific and Skamania Counties.

Referring families to our program is one of the greatest ways for doctors and practitioners to provide additional support to children in their care. Washington’s Department of Early Learning has written a Letter to Primary Care Providers which highlights how Early Intervention services benefit infants and toddlers and explains how the Early Support for Infants and Toddlers (ESIT) program coordinates these services. [Download](#) an ESIT Referral Form and fax all referrals to 360-906-1010.

PRESCHOOL AGE (3-5 YEARS) DEVELOPMENTAL SCREENING

Several school districts in Clark and Cowlitz Counties manage their own developmental screenings for children ages 3-5 years living within their boundaries. Please refer to the links below to help you locate the special services programs within each district.

Clark County

- [Battle Ground](#)
Special Services (360) 885-5318
- [Camas](#)
Special Services (360) 833-5570
- [Evergreen](#)
Melanie Lowder, Early Childhood Center
(360) 604-6700
- [Hockinson](#)
Special Services (360) 448-6415

- [Vancouver](#)
Sandy Self, Special Services
(360) 313-4853
- [Washougal](#)
Special Services (360) 954-3021

INNOVATIVE SERVICES NW

Pediatric Therapy & Early Intervention
A Neurodevelopmental Center Located in Vancouver, Washington

Since 1978, Innovative Services NW Pediatric Therapy has been serving the special needs of children. We provide an array of services including Speech, Occupational, and Physical Therapy. We offer services to children who have developmental delays or disabilities as well as other diagnosed conditions. These delays may include challenges such as learning to crawl or walk, using hands to play, producing speech or coordinating sucking or chewing. We provide pediatric therapy to children in their most critical time of development and seek to empower them to reach their maximum potential.

Serving Southwest Washington communities including, but not limited to, Vancouver, Battle Ground, Camas, Ridgefield, La Center, Washougal, and Woodland. We welcome families from any geographic location for outpatient and specialty services.

**For new referrals, contact Lori Collins
Family Support Coordinator/Lead FRC at (360) 823-5147**

[Link to ESD112](#)

The image shows four bilingual flyers for '1-2-3 Grow & Learn Groups' and 'Grupos 1-2-3 Crecer y Aprender'. The flyers are for Battle Ground, Vancouver, and Washougal. Each flyer includes the text 'IT'S FREE!', '¡Únete a nosotros, es gratis!', and a list of activities. The Vancouver flyer includes a table with columns for 'Lunes', 'Martes', 'Miércoles', 'Jueves', and 'Viernes'.

	Lunes	Martes	Miércoles	Jueves	Viernes
Age	18-36 Months				
Time	10:00 AM - 12:00 PM				
Location	1000 NW 20th Ave.				
Phone	360-954-3021	360-954-3021	360-954-3021	360-954-3021	360-954-3021